Science Advisory Committee Meeting
Notes from 5-23-02 at Round Meadows, Catoctin Mountain Park

Participants: Ellen Gray (NPS – NCR), Jim Voigt (NPS – CATO), Sue Salmons (NPS – ROCR), Diane Pavek (NPS – NCR), Mikaila Milton (NPS – NCR), John Sinclair (NPS – NCR), Christina Wright (NPS – NCR), Doug Curtis (NPS – NCR), Brent Steury (NPS – NACE), Dale Nisbet (NPS – HAFE), Marcus Koenen (NPS – NCR), Wendy Cass (NPS – SHEN), Sue Salmons (NPS – ROCR), Bryan Gorsira (NPS – MANA), Julie Thomas (EPA – Chesapeake Bay Program), Robert Higgins (NPS – WASO), Jim Sherald (NPS – NCR), Steve Seagle (UM – Center for Environmental Sciences), Jim Comiskey (Smithsonian), George Taylor (George Mason University), Doug Samson (TNC – MD), Lindsay McClelland (NPS – GRD), Sid Covington (NPS – GRD), Carolyn Davis (NPS – CATO), Jae Martin (NPS – HAFE), Kent Schwarzkopf (NPS – APPA), Diane Ingram (NPS – CHOH), Andrew Banasik (NPS – EPMT), Betsy Chittenden (NPS – WOTR), Patricia Bradley (EPA), Ed Wenschoff (NPS – ANTI), Joe Calzarette (NPS – ANTI).

Introduction

Welcome and administrative details were discussed by Ellen Gray.

Agenda

10:00 Welcome/Overview/Purpose and Outcomes/Today's Tasks

11:00 Breakout Session.

12:00 Lunch

12:30 Breakout Cont.

3:00 Overview of Monitoring Workshop

Ground Rules

Ground rules developed at the 1-10-02 SAC were adapted. Ground Rules include:

- One person speaks at a time.
- No side conversations
- Explain the reasons behind your statements or questions
- Focus on interests, not positions
- Help keep the discussion focused
- Be specific—use examples
- Listen respectfully
- Leave on Time

Overview

The NPS Inventory and Monitoring program was established to 1. collect baseline resource inventories of 12 data sets including vertebrates and vascular plants and 2. establish long-term ecological monitoring program.

Implementation steps for the Monitoring Plan include establishing: 1. a Board of Directors, 2. a Science Advisory Committee (SAC), 3. review of park data, 4. hold a scoping workshop, 5. conduct peer review, and turn in a final plan.

Timeline:

Event		**Product**
Formed BOD & SAC	FY 01	BOD Charter
Interview Parks – priorities and current monitoring	FY01	Park Summaries
2nd SAC	FY02	9 Workgroups
3rd SAC	FY02	Resources, threats, ecological effects
4th SAC	TODAY	Vital Signs, overlap, protocols
Resource Managers	FY02	Network Goals
2nd BOD	FY02	Approve goals, plan for workshop
Monitoring Workshop	FY02	Peer Review, Vital Signs, Protocols, models, partnering
Peer Review	FY03	Draft Monitoring Plan – Conceptual Models
Peer Review SAC Mtg.	FY03	Draft Monitoring Plan – Vital Signs
Peer Review SAC Mtg	FY04	Draft Monitoring Plan – Complete
BOD	FY04	Approve monitoring plan !

Review of comments received during the March 2002 SAC.

- Fatty Snacks (we now have more)

- More Expertise (we have invited over 220 people to the Monitoring Workshop; workgroup facilitators will have a list of people already registered).

- Sharpie Markers (each group has 1)

- Identify overlap among workgroups (we will begin that task today)

- Summary of Current Monitoring (this has been developed and sent to all participants)

- Improved Timeline (as seen during Ellen's presentation)

Purpose of Today's Meeting

Continue the development of an integrated and comprehensive long-term monitoring plan for the National Capital Region of the NPS to provide information essential to preserving and enhancing the region's most important natural resources.

Expected Outcomes

1. Complete list of stressors, sources, their ecological effects on each Important Resource within NCR and identify vital signs.
2. Identify overlap among working groups.
3. Preview the July Scoping Meeting

Workgroup Tasks

Workgroups were set up for each Important Resource at the January SAC. Today's tasks are to

1. Complete Tables started during the March SAC. Completely identify: Resource Components, Stressors, Sources, Ecological Effects, Severity of Threat, Indicators. Review the work completed in the working groups during the last SAC. Conduct quality control to make sure all resource components, threats, etc have been correctly identified. Use consistent terminology. Get more specific.

2. Identify Overlap among workgroups. Each workgroup will brainstorm to identify where there is overlap with other workgroups. Overlap may consist of common threats, common resource components, common vital signs. Facilitators will meet in the future to address overlap issues. Workgroups should make suggestions on how to best address overlap issues.

3. For groups that are done, they should begin to identify standard protocols used to monitor vital signs.

<Workgroups Meet>

The following workgroups met and updated tables started during the 3/7/02 SAC Meeting. See attached spreadsheet with updated table for all workgroups.

Air (Doug Curtis, Julie Thomas, George Taylor)

Water (Ellen Gray, Carolyn Davis, Jim Voigt)

Geology (Bob Higgins, Lindsey McClelland, Sid Covington, Ed Wenschoff, Joe Calzarette, Dale Nisbet, Christina Wright)

Landscape (Steve Seagle, Brian Gorsira, Betsy Chittenden, Jim Sherald, Pat Bradley, Jim Comiskey, John Sinclair).

RTE (Diane Pavek, Kent Schwarzkopf, Doug Samson, Marcus Koenen, Jae Martin)
Vegetation (Sue Salmons, Brent Steury, Mikaila Milton, Wendy Cass, Drew Banasik)
NOTE: See Appendix 1 below for RTE notes from their breakout session.

NOTE: Invertebrate and Wildlife Workgroups are scheduled to meet later in June.

Update on Monitoring Workshop (aka Scoping Workshop)

Ellen Gray went over the agenda (See Appendix 2). The Monitoring Workshop Agenda has already been sent out. Note that:

9 July – Steve Fancy (NPS – I & M Monitoring Coordinator) will discuss "what will the I & M Program do for you.

Larry Morse (NatureServe Botanist) will present how the parks in NCR are critical to the region's biodiversity.

Breakouts will include: crossing park boundaries, educating the public, sound science: relevancy to park operations.

10 July – Workgroups break out: Review SAC work/threats/ecological effects, indicators (in greater detail). Identify priority monitoring goals and protocols, information gaps.

Group: common themes among workgroups

11 July – Workgroups break out: Develop and prioritize monitoring questions.

Group: prioritizing monitoring goals and questions across workgroups.

Wrap-up/Next Steps.

Ellen Gray made a request for everyone to register including park representatives. Follow-up information will be sent to registered participants (lodging, agenda, etc.)

Suggestions for next meeting – Discussion and Q & A:

All participants should look at the EPA Website and locate the Review of Monitoring Indicators (Note: Patricia Bradley will provide the web address when it becomes available.)

Next Meeting: 9-11 July, NCTC.

Action Items: I & M Team will gather the tables from each workgroup and will integrate the information before the July Meeting. In addition, facilitators and workgroup leaders will meet independently to discuss overlap issues addressed during each of the workgroups today.

Appendix 1: Notes from the Rare, Threatened, and Endangered Resources Workgroup

Participants: Kent Schwarzkopf (NPS – APPA), Doug Samson (TNC – MD), Marcus Koenen (NPS – NCR), Diane Pavek (NPS – NCR), Dianne Ingram (NPS – CHOH), and Jae Martin (NPS – HAFE)

Purpose Statement

Continue developing an integrated and comprehensive long-term monitoring plan for the National Capital Region in order to provide information essential to preserving and enhancing the region's natural resources.

Expected Outcomes:

1. Finalize prioritization scheme
2. Finalize list of RTE Species to be considered by this workgroup
3. Identify next steps to generate monitoring plan
4. Identify major stresses, sources, ecological effects, and vital signs
5. Identify overlap with other workgroups

Discussion

1. The group finalized prioritization criteria as follows:

Highest priority:

a. Species present in park with legally mandated protection: Federally listed Threatened and Endangered Species. Also animals listed as Threatened or Endangered by Maryland. (Note that federally listed species rank higher than state listed species).

b. Species present in park ranked as G1-G2 by Heritage.

c. Species present in park ranked as G3 and have S1-S3 in state where they occur. This criteria must take into account the number of states that a species occurs in. The fewer occurrence the greater the species' importance.

d. Species present in the park ranked as G4/S1. Note, that this ranking would be most useful to the parks as they consider additional monitoring needs outside of those identified by this regional planning process.

2. Finalize list of RTE Species to be considered by this workgroup

The handout "RTE Criteria Species2" was reviewed.

The G? Species were removed from the list.

Species with ranking of SH, SX, SR will be retained.

3. Identify next steps to generate monitoring plan

Two major needs were discussed.

I. Site based approach

The group discussed the need to take a site-based approach to conserving and monitoring RTE species. Sites have already been ranked and a threat analysis is available for many sites from the State Heritage program. Heritage will be queried for site-based information (see tasks identified below).

II. Vegetation Communities

In addition to ranking species the group developed criteria to rank vegetation communities. A query will be submitted to the state heritage programs to identify communities meeting the following criteria:

a. All Vegetation Communities with Ranks G1-G3 or S1 where available.

In addition, the group expressed the need to have important vegetation communities identified by expert opinion.

4. Identify major stresses, sources, ecological effects, and vital signs

Using the site based approach, a threat analysis would be provided for each site identified through the heritage query.

In addition, it was discussed that the site-based approach would work well for plants but not very well for animals. The group reviewed the animal species on the handout "RTE Critieria Species2" and identified threats and monitoring needs. See attached spreadsheet "WorkgroupSyntheisX"and look at RTE Criteria Specie - TAB.

5. Identify overlap with other workgroups

The workgroup identified issues that overlap with other workgroups. A future discussion among facilitators would try to resolved/address overlap issues:

Overlap Issues (RTE)

Topic	Working Groups

PIF Priority Species	Wildlife WG
Rare Communities	Discuss with Veg. Comm. WG; RTE should take the lead, however.
Rare Animals	Wildlife WG
Aquatic Inverts (Green Floater; Amphipods [Blue Ridge, Hays, Kenks, and NV Well], A. Spring Snail, Lampsilis cariosa)	Water Quality WG/Geology WG
Grassland Birds	Wildlife WG
Forest Interior Dwelling Birds	Wildlife WG

Action Items:

1. MK will check the current status of invertebrates with a G? ranking.

2. MK will review NPSpecies to identify which species occur in which parks. The updated list will be sent to resource managers to review. Resource Managers should also indicate if surveys have occurred in the park. Species should be identified by c = confirmed w/in last 25 years (add number of confirmed sites if known); p = presumed; h = confirmed >25 years ago.

2. Query heritage programs for site lists for all species meeting criteria stated above. The site lists must include full records.

2a. Assemble site lists with ranks, threats, conditions.

3. Query heritage programs all G1-G3/S1 Vegetation Communities that occur on NPS lands including APPA. This checklist will require park review.

Appendix 2. Notes from the Water Resources Workgroup

Participants: Ellen Gray, Carolyn Davis, Jim Voigt, and Dorothy Keough

Discussion:

The Water Group reviewed and revised the tables created during the previous SAC meeting. Technical notes were made directly on the tables. Two new stressors were added (hybridization and overfishing/harvesting/collecting) and two new sources were added (sound pollution and utility crossing/dredging). Resource components were also changed. Precipitation was removed since it is a stress (acid rain) rather than a component. Landuse/watershed was also removed as a component because it is captured in other components. Plankton, vernal pools, and waterfowl/shorebirds were added. The following observations were made during the discussions:

There is the need for a standard understanding of what we mean by "severity". It could be the likelihood of something happening, or it could be the level of impact to the resource. It was noted that severity would vary park-by-park, as well as regionally. For example, the severity of impact may be higher in Anacostia than in Catoctin. Finally, it was noted that something can be a threat to one resource, while being a benefit to another; or it could be a threat at one level of intensity, and a beneficial factor at another (an example is nutrients). We realized that the assessment of threat could be a question of scale.

The group acknowledged that we do not have enough information to make an assessment about toxics and drugs/hormones. The group agreed that information must exist regarding the level of impact of acid rain on NCR waters that could be obtained from other subject experts.

We noted that we also have to consider the resilience to the threat. For example, the effect of deforestation will last longer than the effect of high nutrient loads. Some threats can be reversed; others cannot.

We took out "energy cycle disruption" as a stressor. We felt that it is a mechanism for the stressors.

At the end of the meeting we made a listing of the possible overlaps among Work Groups, including:

Overlap:	Group:	Recommended to lead:
Waterfowl/shorebirds	Wildlife	Wildlife
Groundwater	Geology	Both??
Herps	Wildlife	Water – aquatic life stages and species Wildlife – rest
Wetlands/veg	Vegetation	Both??
Physical habitat	Geology	Water-areas in waterbodies

Benthos	Inverts	Water
Fish	Wildlife	Water
Plankton	Inverts	Water
Surface water qual.	Geology	Water
Vernal pools	Geology?	Water

Appendix 3.

NATIONAL PARK SERVICE MONITORING WORKSHOP:
PLANNING FOR THE FUTURE IN THE NATIONAL CAPITAL REGION
9-11 July, 2002

National Conservation Training Center, Shepherdstown, WV

Purpose of meeting: Continue the development of an integrated and comprehensive long term Monitoring Plan for the National Capital Region of the National Park Service that provides essential information needed to preserve and enhance the region's most important natural resources.

Expected Outcomes: As a result of the meeting, we will:

(1) create a network of stakeholders united to preserve the most important resources in the National Capital Region

(2) review technical information developed by the Science Advisory Committee to lead to the development of a long-term monitoring plan of the region's most important resources.

Specifically, we will:

(a) identify major threats (stressors and their sources) and their ecological effects to each important natural resource within the National Capital Region
(b) identify ecological indicators to monitor important resources and their threats
(c) develop monitoring objectives in line with monitoring goals guiding the National Park Service Inventory and Monitoring Program
(d) identify protocols that could be used to monitor indicators
(e) identify collaborative approaches to implement monitoring.

Tuesday - 9 July 02 (Day 1)

10:00	Welcome and Introductions
	Purpose and expected outcome of the Workshop
11:00	The National Park Service Inventory and Monitoring Program – how is this program relevant to the parks?
	The National Capital Region – a biological treasure chest
12:00	Lunch
1:00	The Regional Science Advisory Committee

Important Resources in the National Capital Region

Network Goals

2:00 Facilitated breakout sessions. Topics will include:

Using sound science to manage the parks – exploring the relevancy of long-term monitoring to park operations.

Crossing park boundaries – developing partnerships to protect natural resources inside and outside of the National Parks.
Educating the public – how can scientists work with park interpreters?

4:00 Group Discussion – building internal and external partnerships.

5:00 Adjourn

7:00 Evening Social

Wednesday - 10 July 02 (Day 2)

8:00 Group Discussion: Workgroup Goals and Objectives.

9:00 Thematic Breakout Session: Each workgroup reviews draft threats, ecological effects, and potential ecological indicators. Workgroups include: Air, Geology, Invertebrates, Landscape, Rare – Threatened and Endangered Species and Communities, Vegetation Communities, Water, Wildlife.

12:00 Lunch

1:00 Thematic Breakout Session: Workgroups identify priority monitoring goals and objectives. Identify potential protocols.

4:00 Group Discussion: Exploring common themes among workgroups.

5:00 Adjourn

Thursday - 11 July 02 (Day 3)

8:00 Group Discussion: Workgroup Goals and Objectives

9:00 Thematic Breakout Session: Workgroups develop goals and objectives.

12:00 Lunch

1:00 Group Discussion: Prioritizing workgroup objectives.

3:00	Wrap – up. Identify next tasks.
4:00	Adjourn